IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No. 9066

Application of:

PAPIERNIAK, K. et al.   Group Art Unit: 2176

Serial No. 10/073,208   Examiner: Robert M. Stevens

Filed: February 13, 2002

For: VISUALIZATION TOOL FOR WEB ANALYTICS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF KAREN A. PAPIERNIAK
UNDER 37 C.F.R. §131

Sir:

Karen A. Papierniak, applicant in the above-identified patent application hereby declares that:

1.   During all of the dates covered by this DECLARATION, she was employed by NCR Corporation, 1700 South Patterson Blvd., Dayton, Ohio 45479-0001, the assignee of the present invention.

2.   The invention was conceived on or before December 30, 1999, as evidenced by the invention disclosure record titled "Visualization Tool for Web Analytics," assigned NCR Docket No. 9066 and dated December 30, 1999, attached hereto and labeled Exhibit A.

3. All statements made of my knowledge are true and all statements made on information and belief are believed to be true.

4. I understand that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and may jeopardize the validity of this application or any patent issuing thereon.

Signed:

Karen A. Papierniak, Applicant

Dated: 16 Mar 2005

APPENDIX A

⊚NCR

INVENTION DISCLOSURE RECORD
PREPARATION & ROUTING INSTRUCTIONS

<table>
<tr><td colspan="2">LAW DEPARTMENT USE ONLY</td></tr>
<tr><td>Docket No.</td><td>9066</td></tr>
<tr><td>Date Received</td><td>2-7-00</td></tr>
<tr><td>Attorney</td><td>JS</td></tr>
</table>

Complete and fill in every item. Write "none" or "unknown", if appropriate. Use an additional blank page for any item where more space is needed. Have your manager review and sign (items 9 and 10) before submitting to the NCR Law Department.

Submit original and one copy to: NCR Corporation, Intellectual Property Section, Law Department, ECD-2, 101 W. Schantz Avenue, Dayton, Ohio 45479. *Keep one copy for your file.*

(1) Inventor(s)	Facility	Department	Phone Number
Karen Papierniak	Woodbridge	TSD CIA Dev.	810 632-7538

(2) Title of Invention (Preferably 10 words or less)
Visualization Tool for Web Analytics

(3) Product, Project Name or Class Number	(4) Date Invention was First Conceived	(5) Actual or Anticipated Date of First Product Sale, Customer Availability, or Public Disclosure
Web Analytics	February 1999	3Q 2000

(6) Description of the Invention
Please attach additional pages providing the following:
a. **Statement of problem solved by the invention** - Briefly state the problems your invention solves, its purposes and advantages, and how it differs from prior designs that you are aware of.
b. **Description of the invention** - Describe your invention in detail. Include and refer to sketches or diagrams and, if appropriate, attach documents such as previously prepared descriptions or specifications.
c. **Summary of Invention** - State what you regard at the present as the key inventive concept - i.e., the gist of your invention.

(7) Inventor Signature(s) (Each person listed in Item 1 above is an inventor and must sign and date.)

Signature of Inventor	Date	Signature of Inventor	Date
K Papierniak	30 Dec 99		
Signature of Inventor	Date	Signature of Inventor	Date

(8) Witness Signatures (Two persons who are not inventors must read and understand this disclosure, and then sign and date.)

Signature of Witness	Date	Signature of Witness	Date
	1/12/00		Jan 18, 2000

FOR MANAGER USE ONLY

(9) Strategic Value of Patent Coverage (State what you regard as the strategic value to your business unit of having a patent for this invention - e.g., licensing revenue, preventing use by others, importance/breadth of the invention, etc.)

(10) Reviewed and approved by

Signature of Manager	Date	Manager Name (Please print)	Tentative Rating * (A, B, C, D, or U)
	1/29/200		C

* Ratings of "A" through "D" indicate relative value, with "A" being highest and "D" being lowest. A rating of "U" indicates the value is unknown.

IDR 10/24/96

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(6) Description of the Invention:

a. Statement of problem solved by the invention - Briefly state the problems your invention solves, its purposes and advantages; and how it differs from prior designs that you are aware of.

Currently web site analysis tools use URLs, page identifiers (page title, file type, directories), and content classification to identify web pages in a report. For example a web page with

- a URL of ~~~~ ... . could have
- a page id of *Introduction to NCR* and
- a classification of *Investor Relations* in the following report:

Report: Promotional Click-Through's for December 30, 1999

Web Page ID	User	Promotion Click-Through
1. Home Page 3	Visitor	2,231
2. Home Page 2	Partner	1,278
3. General Product Description	Customer	1,234
4. General Product Description	Visitor	1,210
5. Services Q&A	Customer	1,199
6. News: Press Release 3	Visitor	1,245
7. News: Press Release 2	Partner	1,119
9. Services Q&A	Partner	899
10. Home Page 1	Customer	753

These types of identification lead to abstractions that can cause confusion as the web site grows and ages. For example if multiple home pages were implemented for different types of user they would be identified as *home page 1, home page 2* and *home page 3* and classified as *home page for customers, partners, and visitors*. In this example understanding the differences between the home pages would aid in analyzing ROI, use of on-line services, response to promotions and ease of navigation.

Also as the web sites ages the web pages will be replaced or updated. When looking at reports spanning a longer period of time (over 3 months) the changes made to the web pages may not be reflected in the URL, page identifier, or classification. A visualization tool makes these differences apparent by graphically displaying historical changes kept by the visualization database.

The visualization tool combines the reports with the web pages to present an integrated view to the business analysts.

The visualization tool for web analytics consists of:
- A graphical user interface containing icons, web pages, and report data
- A relationship engine to retrieve and display the web pages and report data
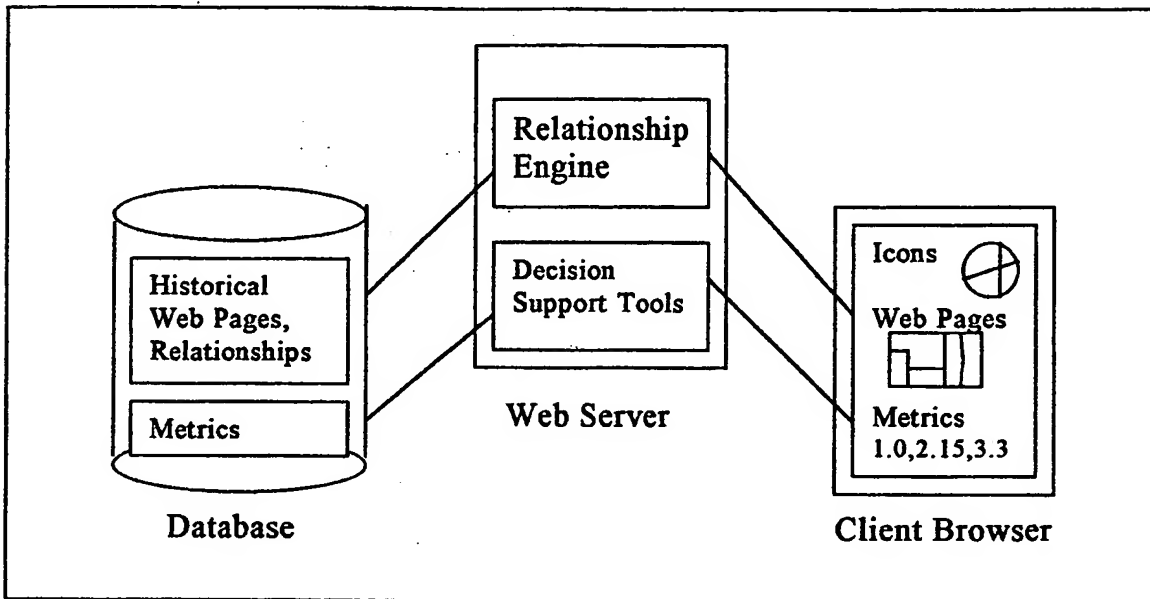- A database to store historical web pages and relationships

The visualization tool takes a decision support tool, like OLAP, and combines the web data being analyzed with the actual web pages. This tool removes a layer of abstraction and helps clarify the data being analysied.

b. Description of the invention -. Describe your invention in detail. Include and refer to sketches or diagrams and, if appropriate, attach documents such as previously prepared descriptions or specifications.

The visualization tool for web analytics consists of:
- A graphical user interface containing icons, web pages, and report data
- A relationship engine to retrieve and display the web pages and report data
- A database to store historical web pages and relationships

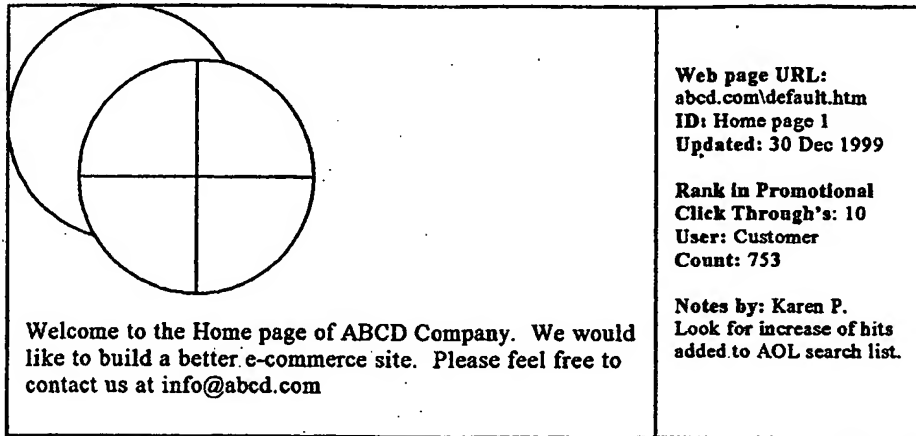The following figure depicts the components of a configuration.

There are two methods of implementing the graphical user interface containing icons, web pages, and report data. One method is to add thumb-print-size web pages to a browser report as show below. The thumb-print-size web pages can be expanded, shaded to show age, bars on top to show place in the web site hierarchy.

Report: **Promotional Click-Through's for December 30, 1999**

Web Page ID	User	Promotion Click-Through
1. Home Page 3	Visitor	2,231
2. Home Page 2	Partner	1,278
3. General Product Description	Customer	1,234
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8. General Product Description	Partner	955
9. Services Q&A	Partner	899
10. Home Page 1	Customer	753

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The second method takes existing web pages and adds the metrics to them. As the business analyst or web designer browsers the site related metrics for the page will be displayed at the same time. The following diagram is an example of the second method.

<table>
<tr>
<td>

Welcome to the Home page of ABCD Company. We would like to build a better e-commerce site. Please feel free to contact us at info@abcd.com
</td>
<td>

Web page URL:
abcd.com\default.htm
ID: Home page 1
Updated: 30 Dec 1999

**Rank in Promotional
Click Through's:** 10
User: Customer
Count: 753

Notes by: Karen P.
Look for increase of hits
added to AOL search list.
</td>
</tr>
</table>

c. Summary of Invention - State what you regard at the present as the key inventive concept - i.e., the gist of your invention

The Visualization Tool for Web Analytics combines web pages with their associated metrics in a single view to the business analyst and web site designer. The combination removes a layer of abstraction and assists the analyst or designer in:
- making improvements to their web sites
- measuring ROI or promotional effectiveness
- comparing metrics of current web pages to past web pages
- comparing web pages that are similar in function but different in presentation

The visualization tool adds a graphical presentation to the standard spread sheet reporting approach.